

a second tapered wedge segment comprising a first end portion and a second end portion, said first and second wedge segments joined at said second end portions to form a substantially U-shaped body, said first and second tapered wedge segments rotated with respect to each other along a longitudinal axis of said apparatus; and

a slot defined by an area between said first and second wedge segments and extending from said first end portions to said joined second end portions of said wedge segments.

12. (amended) A jet pump assembly in accordance with Claim 11 wherein said first and second wedge segments are deformable around a restrainer bracket set screw.

Remarks

The Office Action dated March 26, 2003 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-4, 6-9, and 11-19 are pending in this application. Claims 1-12 stand rejected. Claims 5 and 10 have been cancelled. Claims 13-19 are withdrawn from consideration.

Submitted herewith is a Submission Of Marked Up Claims in accordance with 37 C.F.R. § 1.121(c)(1)(ii).

The restriction requirement is respectfully traversed.

The Office Action has not shown the claims of Group I (apparatus in Class 376/372) and the claims of Group II (process in Class 376/260) are patentably distinct in accordance with MPEP §806.05(e). Particularly, the Office Action dated 11/05/02 did not show, nor does the current Office Action show, that the apparatus as claimed can be used to practice another and materially different process. Specifically, the Office Action of 11/05/02 suggests at page 2 that

the "apparatus can be used as a jet pump in a non-nuclear facility, i.e., a petroleum refinery."

Applicant respectfully submits that the Office Action of 11/05/02 has not supplied a materially different process in which the apparatus can be used. Particularly, Applicant submits that the Office Action of 11/05/02 has not supplied any process because the assertion that "the apparatus can be used as a jet pump" is not a description of a process. Also, the apparatus recited in the method claims of Group II (Claims 13-19) is a wedge apparatus that is used to repair a jet pump. Applicant submits that the wedge apparatus recited in method Claims 13-19 can not be used as a jet pump in a petroleum refinery.

Further, Applicant submits that the claims in Groups I and II clearly are related and that a thorough search and examination of any Group would be relevant to the examination of the other Group and would not be a serious burden on the Examiner. Additionally, requirements for election are not mandatory under 35 U.S.C. The current Office Action at page two states that "This reason is not found persuasive because individual searches for Group I and II would not be co-extensive". Applicants respectfully submit that this statement does not appear to be correct because the Examiner has indeed searched Class 376/260 of the Group II claims. The Examiner has cited U.S. Patent No. 6,052,425 to Erbes et al. against Claims 1-12 of the present application. U.S. Patent No. 6,052,425 to Erbes et al. is classified in Class 376/260. Accordingly, Applicant respectfully requests that the restriction requirement be withdrawn.

The objection to the specification under 35 U.S.C. § 112, first paragraph is respectfully traversed.

Paragraph 24 has been amended to describe "First and second wedge segments 82 and 88 are joined at second end portions 86 and 92 to form a substantially U-shaped body 94". Also,

Claims 1 and 6 have been amended to recite "said first and second wedge segments joined at said second end portions to form a substantially U-shaped body". Accordingly, Applicant submits that the specification meets the requirements of Section 112, first paragraph.

For the reasons set forth above, Applicants respectfully request that the objection to the specification be withdrawn.

The rejection of Claims 1-12 under 35 U.S.C. § 112, first paragraph, is respectfully traversed.

As explained above, Paragraph 24 has been amended to describe "First and second wedge segments 82 and 88 are joined at second end portions 86 and 92 to form a substantially U-shaped body 94". Also, Claims 1 and 6 have been amended to recite "said first and second wedge segments joined at said second end portions to form a substantially U-shaped body".

Accordingly, Applicant submits that Claims 1-12 meet the requirements of Section 112, first paragraph.

For the reasons set forth above, Applicants respectfully request that the Section 112 rejection of Claims 1-12 be withdrawn.

The rejection of Claims 1-12 under 35 U.S.C. § 112, second paragraph, is respectfully traversed.

Claims 1 and 6 have been amended to recite "said first and second wedge segments joined at said second end portions to form a substantially U-shaped body" which supplies the antecedent basis for "said joined second end portions".

Claim 12 has been amended to recite "said first and second wedge segments are deformable around a restrainer bracket set screw".

Accordingly, Applicant submits that Claims 1-12 are definite and particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

For the reasons set forth above, Applicants respectfully request that the Section 112 rejection of Claims 1-12 be withdrawn.

The rejection of Claims 1-12 under 35 U.S.C. § 102 (b) as being anticipated by Wivagg (US 6,463,114) or Erbes et al. (US 6,052,452) is respectfully traversed.

Wivagg describes a jack screw replacement device. The device 50 includes two jack blocks 51, 52, a wedge 53, a jack washer 54, and an adjustment screw 55. The jack blocks each have sloping sides 56, and a dual-chamfered side 57 positioned opposite the sloped side 56. The wedge 53 has a plurality of sloped sides 58, a top portion 69, and a bottom portion 59, and is movably positioned between the jack blocks 51, 52. The sloped sides 58 are coextensive, having equivalent slopes with the sloping sides 56. The adjustment screw 55 extends through the jack washer 54, between the sloping sides 56 of the blocks 52, 54, and into a threaded opening 67 in the wedge 53 that extends from the top portion 69 to the bottom portion 59.

Claim 1 of the present application recites a piping support wedge apparatus for a jet pump in a nuclear reactor that includes "a first tapered wedge segment comprising a first end portion and a second end portion; a second tapered wedge segment comprising a first end portion and a second end portion, said first and second wedge segments joined at said second end portions to form a substantially U-shaped body, said first and second tapered wedge segments rotated with respect to each other along a longitudinal axis of said apparatus; and a slot defined by an area between said first and second wedge segments and extending from said first end portions to said joined second end portions of said wedge segments".

Wivagg does not describe nor suggest a piping support wedge apparatus as recited in Claim 1. Particularly, Wivagg does not describe nor suggest a piping support wedge apparatus that includes first and second tapered wedge segments joined at their second end portions to form a substantially U-shaped body, and with the first and second tapered wedge segments rotated with respect to each other along a longitudinal axis of the apparatus. Rather, Wivagg describes a device that includes two jack blocks having sloping sides that are spaced apart to permit a wedge to be movably positioned between the blocks. The two jack blocks are not joined at one end to form a U-shaped body. Rather the two blocks are spaced apart and are moved further apart by the movement of the wedge when the adjustment screw is tightened. Further, Figures 6-8 clearly show that the jack blocks 51 and 52 are aligned and not rotated with respect to each other along a longitudinal axis of the apparatus. Accordingly, Applicant submits that Claim 1 is patentable over Wivagg.

Claim 5 has been canceled.

Claims 2-4 depend from independent Claim 1. When the recitations of dependent Claims 2-4 are considered in combination with the recitations of Claim 1, Applicant respectfully submits that Claims 2-4 likewise are patentable over Wivagg.

Claim 6 of the present application recites a nuclear reactor jet pump assembly that includes "a piping support wedge apparatus positioned between said restrainer bracket and said inlet mixer, said wedge apparatus comprising: a first tapered wedge segment comprising a first end portion and a second end portion; a second tapered wedge segment comprising a first end portion and a second end portion, said first and second wedge segments joined at said second end portions to form a substantially U-shaped body, said first and second tapered wedge segments

rotated with respect to each other along a longitudinal axis of said apparatus; and a slot defined by an area between said first and second wedge segments and extending from said first end portions to said joined second end portions of said wedge segments".

Wivagg does not describe nor suggest a nuclear reactor jet pump assembly as recited in Claim 6. Particularly, as explained above, Wivagg does not describe nor suggest nuclear reactor jet pump assembly that includes a piping support wedge apparatus that includes first and second tapered wedge segments joined at their second end portions to form a substantially U-shaped body, and with the first and second tapered wedge segments rotated with respect to each other along a longitudinal axis of the apparatus. Accordingly, Applicant submits that Claim 6 is patentable over Wivagg.

Claim 10 has been canceled.

Claims 7-9 and 11-12 depend from independent Claim 6. When the recitations of dependent Claims 7-9 and 11-12 are considered in combination with the recitations of Claim 6, Applicant respectfully submits that Claims 7-9 and 11-12 likewise are patentable over Wivagg.

Erbes et al. describe a jet pump auxiliary wedge apparatus that includes a support block that couples to the jet pump restrainer bracket, and a wedge that slidingly couples to a wedge channel in the support block, and engages the inlet mixer to restore a tight rigid fit-up of the jet pump components. The support block includes a wedge channel having tongues depending from the parallel sides of the channel and a hook shaped portion to receive the restrainer bracket. The support block also includes a lock screw to couple the support block to the restrainer bracket. The wedge includes grooves in the parallel sides of the wedge configured to slidingly engage the tongues extending in the wedge channel.

Erbes et al. do not describe nor suggest a piping support wedge apparatus as recited in Claim 1 nor a nuclear reactor jet pump assembly as recited in Claim 6. Particularly, Erbes et al. do not describe nor suggest a piping support wedge apparatus that includes first and second tapered wedge segments joined at their second end portions to form a substantially U-shaped body, and with the first and second tapered wedge segments rotated with respect to each other along a longitudinal axis of the apparatus. Rather, Erbes et al. describe a single wedge that slidably couples to a wedge channel in a support block, and engages the jet pump inlet mixer to restore a tight rigid fit-up of the jet pump components. The Office Action suggests at page 6 that the walls of the wedge channel in the support block are tapered wedge segments. Applicant respectfully disagrees with this suggestion because Erbes et al. clearly teach a wedge that slides in a wedge channel in a support block (see Col. 4, line 35 to Col. 5 line 30). Further, even if the walls of the wedge channel in the support block can be considered tapered wedge segments, Erbes et al. do not describe nor suggest that these walls are rotated with respect to each other along a longitudinal axis of the apparatus. Accordingly, Applicant submits that independent Claims 1 and 6 are patentable over Erbes et al.

Claims 5 and 10 have been canceled.

Claims 2-4 depend from independent Claim 1 and Claims 7-9 and 11-12 depend from independent Claim 6. When the recitations of dependent Claims 2-4, and 7-9 and 11-12 are considered in combination with the recitations of Claim 1 and 6 respectively, Applicant respectfully submits that Claims 2-4, 7-9 and 11-12 likewise are patentable over Erbes et al.

Further, Applicant respectfully traverses the suggestion at page 7 of the current Office Action that Claims 1-5 are readable on the art cited on page 7. Applicant submits that for at least the reasons set forth above, Claims 1-5 are patentable over the cited art.

For the reasons set forth above, Applicants respectfully request that the Section 102(b) rejection of Claims 1-12 be withdrawn.

The rejection of Claims 6 and 8-12 under 35 U.S.C. § 102(b) as being anticipated by Ishii (JP 10-311893) is respectfully traversed.

Ishii describes a jet pump riser support device that includes a holding sleeve 10 mounted to the inner wall of the reactor pressure vessel 1 to slidably hold jet pump riser 4. An L-shaped support bracket 9 mounted to the inner wall of the pressure vessel supports the lower end of the riser. Alternatively a U-shaped support bracket is used in place of the L-shaped bracket to support the lower end of the riser by hugging the riser from the side. Ishii does not describe nor suggest a piping wedge apparatus.

Ishii does not describe nor suggest a nuclear reactor jet pump assembly as recited in Claim 6. Particularly, Ishii does not describe nor suggest nuclear reactor jet pump assembly that includes a piping support wedge apparatus that includes first and second tapered wedge segments joined at their second end portions to form a substantially U-shaped body, and with the first and second tapered wedge segments rotated with respect to each other along a longitudinal axis of the apparatus. Specifically, Ishii does not describe nor suggest any wedge apparatus. Rather, Ishii describes a U-shaped support bracket. The U-shaped support bracket does not include tapered wedge segments that are rotated with respect to each other along a longitudinal axis of the bracket. Accordingly, Applicant submits that Claim 6 is patentable over Ishii.

Claim 10 has been canceled.

Claims 8-9 and 11-12 depend from independent Claim 6. When the recitations of dependent Claims 8-9 and 11-12 are considered in combination with the recitations of Claim 6, Applicant respectfully submits that Claims 8-9 and 11-12 likewise are patentable over Ishii.

For the reasons set forth above, Applicants respectfully request that the Section 102(b) rejection of Claims 6 and 8-12 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,



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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Erbes

Serial No.: 10/065,061

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For: JET PUMP SET SCREW WEDGE

: Art Unit: 3641

: Examiner: R. Palabrica

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SUBMISSION OF MARKED UP CLAIMS

Commissioner for Patents
P.O. Box 1450
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A marked-up version of amended paragraph 24 and amended Claims 1, 6, and 12, in accordance with 37 C.F.R. § 1.121(c)(1)(ii), follows below.

IN THE SPECIFICATION

Please delete paragraph 24 and replace with the following replacement paragraph 24.

[0024] Figure 4 is a front view of a wedge apparatus 80 in accordance with an embodiment of the present invention. Figure 5 is a top view of wedge apparatus 80 and Figure 6 is a side view of wedge apparatus 80. Referring to Figures 4, 5, and 6, wedge apparatus 80 includes, in an exemplary embodiment, a first tapered wedge segment 82 having a first end portion 84 and a second end portion 86, and a second tapered wedge segment 88 having a first end portion 90 and a second end portion 92. First and second wedge segments 82 and 88 are joined at [first] second end portions [84 and 90] 86 and 92 to form a substantially U-shaped body 94. Wedge apparatus 80 also includes a slot 96 defined by the area between first and second wedge segments 82 and 88. Slot 96 extends from first end portions 84 and 90 to joined second end portions 86 and 92 of wedge segments 82 and 88. Slot 96 is sized to receive restrainer bracket set screw 76.

IN THE CLAIMS

Cancel Claims 5 and 10

1. (amended) A piping support wedge apparatus for a jet pump in a nuclear reactor, said wedge apparatus comprising:

a first tapered wedge segment comprising a first end portion and a second end portion;
a second tapered wedge segment comprising a first end portion and a second end portion,
said first and second wedge segments joined at said [first ends] second end portions to form a
substantially U-shaped body, said first and second tapered wedge segments rotated with respect
to each other along a longitudinal axis of said apparatus; and

a slot defined by an area between said first and second wedge segments and extending
from said first end portions to said joined second end portions of said wedge segments.

6. (amended) A nuclear reactor jet pump assembly comprising:

an inlet mixer;
a diffuser coupled to said inlet mixer by a slip joint;
a restrainer bracket comprising at least one set screw engagable with said inlet mixer; and
a piping support wedge apparatus positioned between said restrainer bracket and said
inlet mixer, said wedge apparatus comprising:

a first tapered wedge segment comprising a first end portion and a second end portion;
a second tapered wedge segment comprising a first end portion and a second end portion,
said first and second wedge segments joined at said [first ends] second end portions to form a
substantially U-shaped body, said first and second tapered wedge segments rotated with respect
to each other along a longitudinal axis of said apparatus; and

a slot defined by an area between said first and second wedge segments and extending from said first end portions to said joined second end portions of said wedge segments.

12. (amended) A jet pump assembly in accordance with Claim 11 wherein said first and second wedge segments are deformable around [said] a restrainer bracket set screw.

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